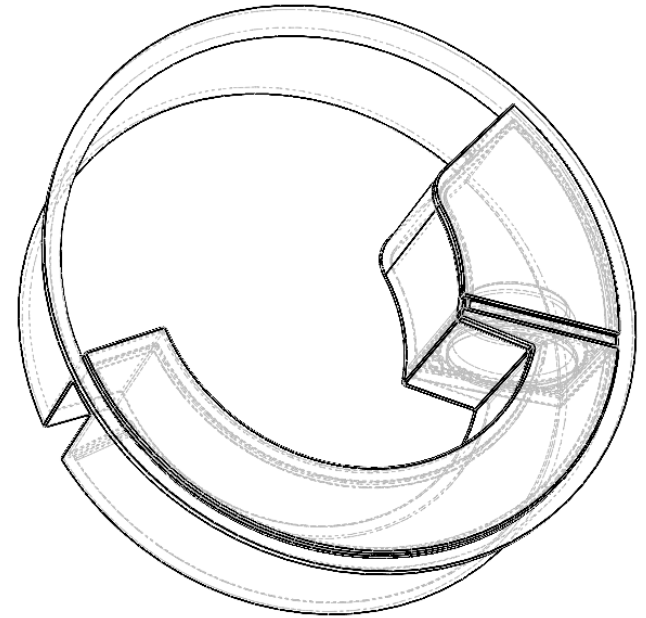
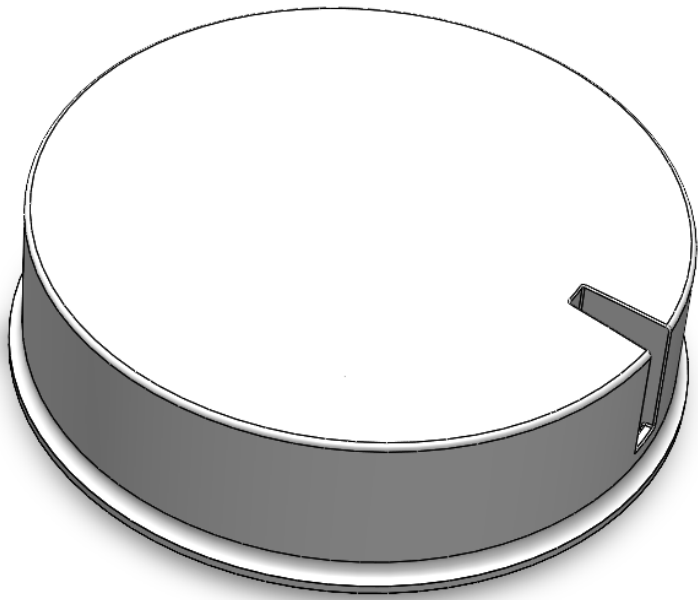


Highly Efficient Low Frequency 520 Hz Sounder

For use with single station 120v detectors



Using just 35% of the volume in a standard 5" director housing a very high output Low Frequency signal is produced with well under 1 Watt of power.

- Minimal power required to meet Temporal 3
- Compact design
- Tuned Resonant Chamber Design
- Minimal power draw – small amplifier, small battery back up



WHAT IS IT?

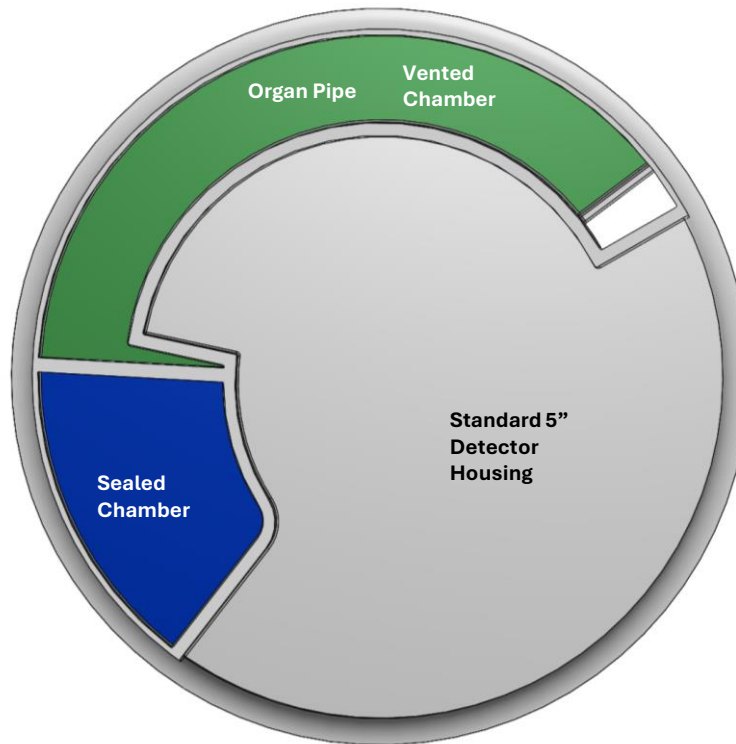
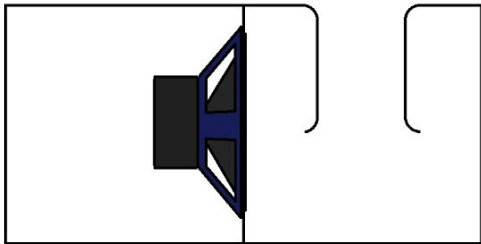
A BLEND OF 2 TECHNOLOGIES

Highly efficient at tuning
limited band frequencies

Creates odd harmonics

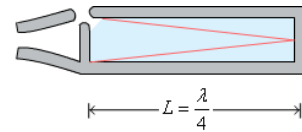


Bandpass Subwoofer Box

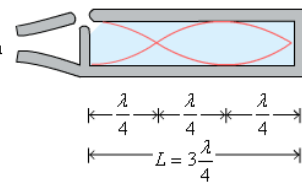


Organ Pipe

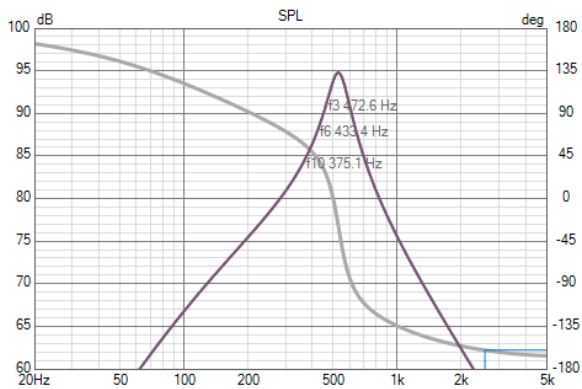
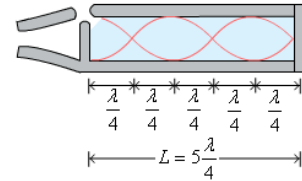
(a)
Fundamental: $f_1 = \frac{v}{4L}$

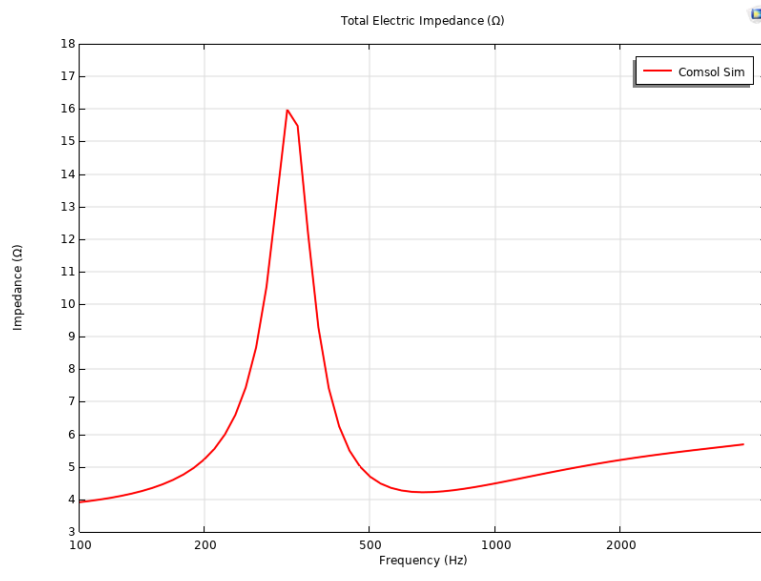
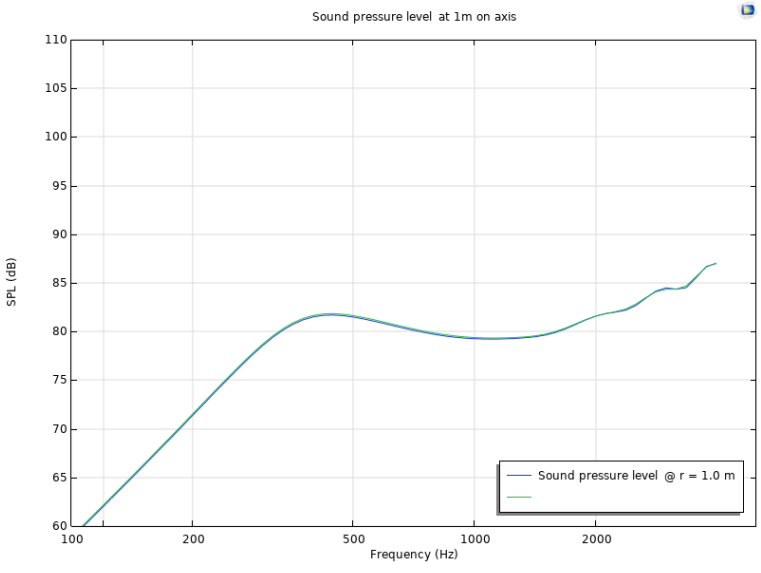


(b)
Second harmonic: $f_3 = 3 \frac{v}{4L} = 3f_1$



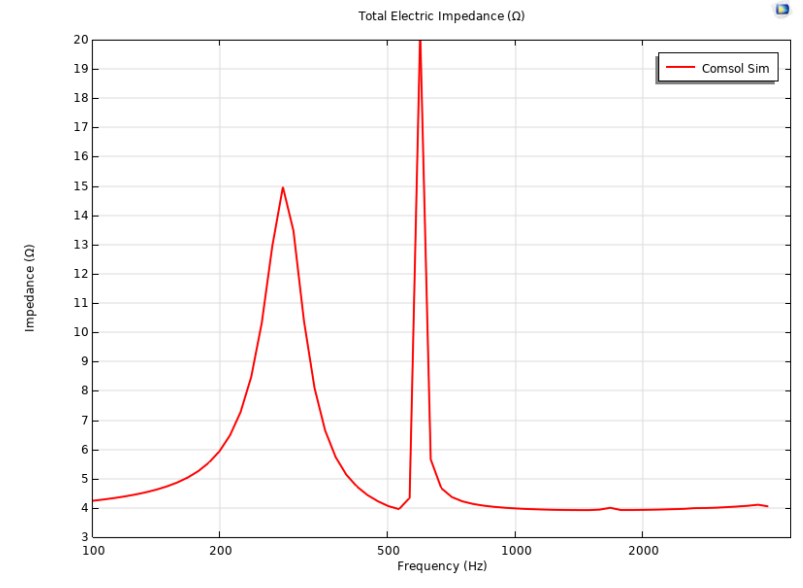
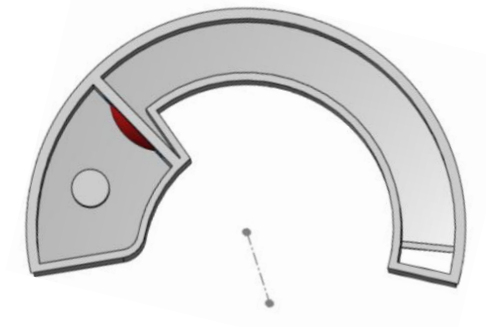
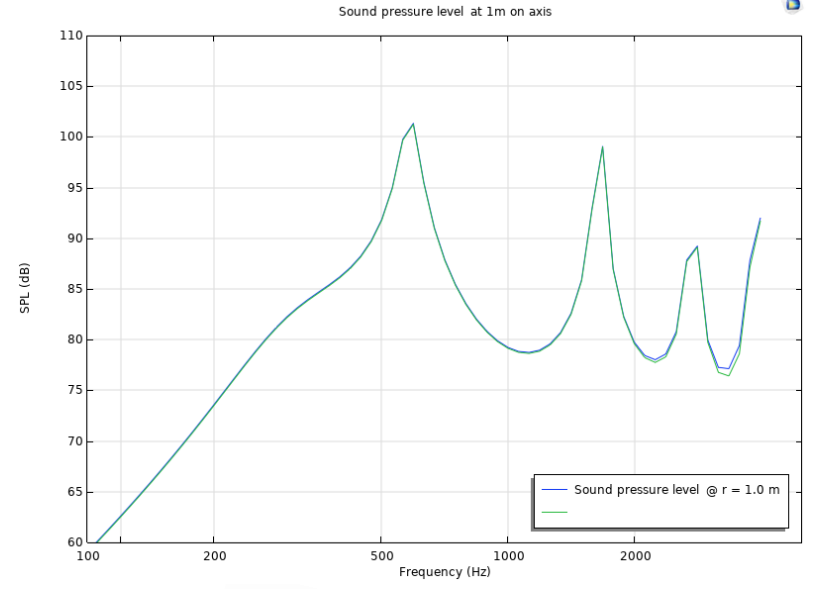
(c)
Third harmonic: $f_5 = 5 \frac{v}{4L} = 5f_1$





Simulations

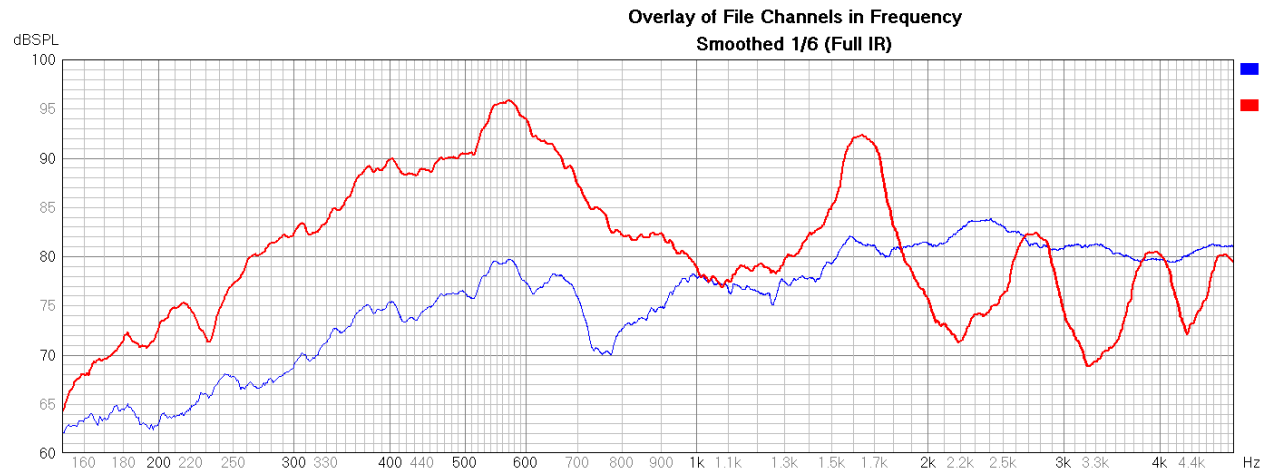
Comparison of
Standard
speaker design
vs.
New LF sounder



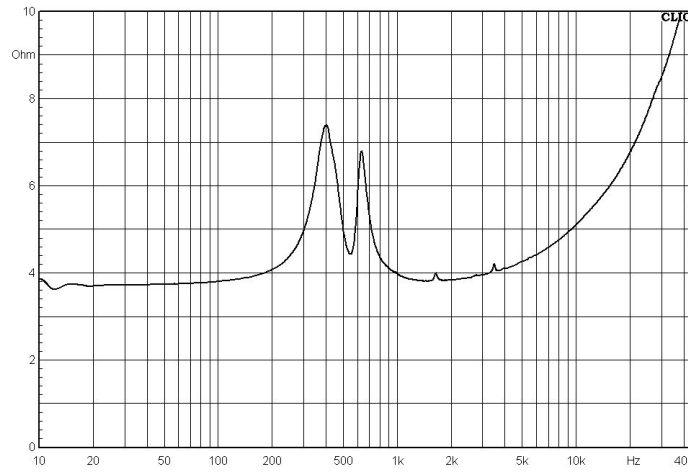
Lab Measurements

Measurement:

- On wall – Half space
- Microphone - 1 meter
- Input - Swept Sine wave, 1 Volt
- DCR – 4 Ohms



(c) EASERA



3D Printed Prototypes

